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Labour market dualities – The impact on aggregate wage growth

Chief Economists’ workshop – Centre for Central Banking Studies
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Based on Ramskogler, P. “Labour market hierarchies and the macro-economy – Do labour market dualities affect wage growth in Europe” (under review with the Journal of Macroeconomics)

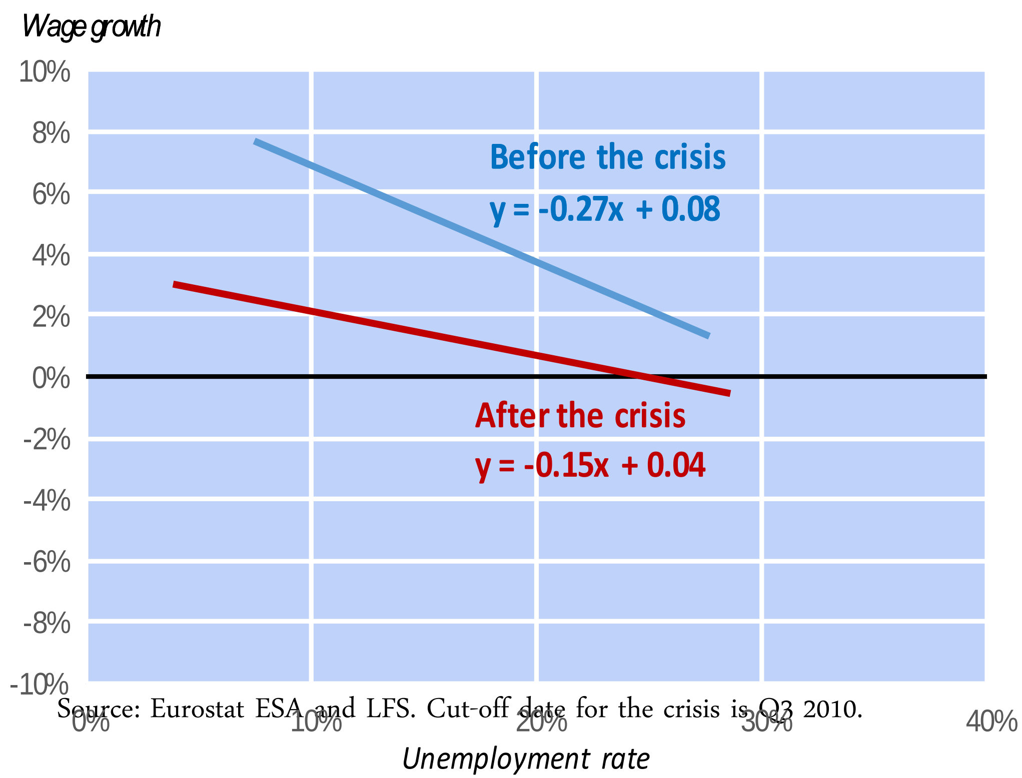
The post-crisis Phillips curve puzzle

- The correlation between unemployment and wage growth has weakend since the crisis

- This weakening adds to the low inflation environment

- This makes monetary policy making and economic analysis more difficult

Wage-Phillips Curve, EU countries, 2004Q1-2016Q4



Source: Eurostat ESA and LFS. Cut-off date for the crisis is Q3 2010.

Declining wage growth – reasons and game changers

- **Secular reasons affecting wage growth:**
  - Globalisation as a positive labour supply shock
  - Structural change
  - Changing labour market institutions

- **Suggested explanations for the fall in the unemployment-wage-growth nexus:**
  - Cyclical factors (OECD, 2014, 2017)
  - Definitional aspects concerning slack (ECB, 2017; IMF, 2017; Bell and Blanchflower, 2018)

Determinants of wage growth I – standard factors

- **Productivity**
  - Originates from human capital theory
  - Employees are remunerated according to their output
- **Reservation wages**
  - Related to bargaining theories (e.g. insider-outsider models)
  - Institutional factors, the wage level and productivity define a wage reference
- **Unemployment rate**
  - Associated with the Phillips curve
  - The likelihood of finding a new job easily determines bargaining power

Determinants of wage growth II – adding dualities

- **Dualities**
  - Related to dual labour market theory
  - Labour markets are segmented but primary jobs are rationed
  - Secondary jobs that suffer from a wage penalty

➢ **Not only the likelihood of finding a new job matters, but also the kind of new job**

➢ **This yields a composite wage formula (building on Blanchard and Katz, 1999):**

Nominal wage growth = inflation + productivity growth – wage share – unemployment rate ***– dualities***

What has changed because of the crisis?

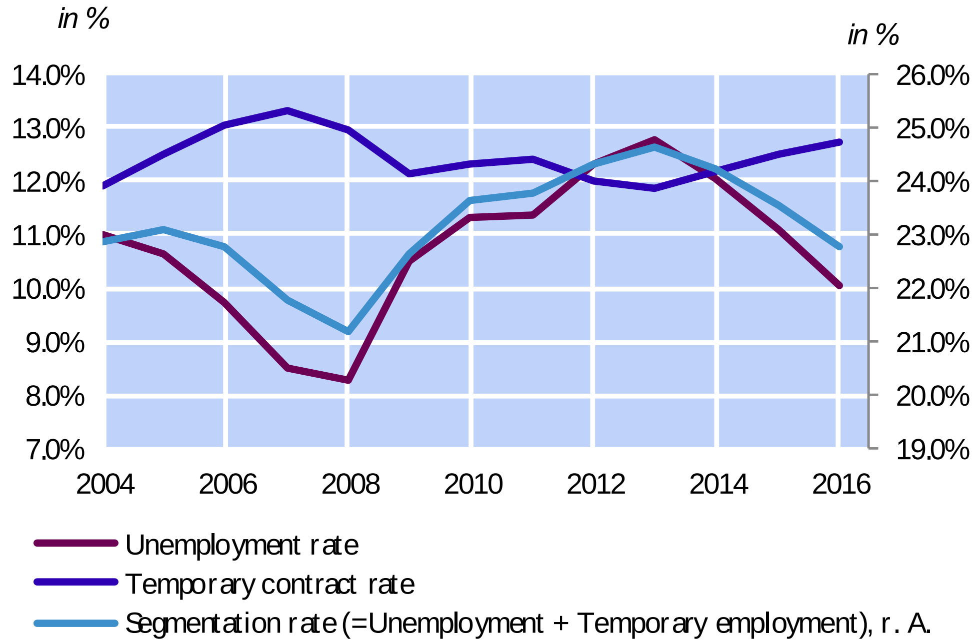
- **Dual labour markets aggravate the impact of a crisis on wages through:**
  - **Increased competition**
    - In a crisis, cost-cutting and outsourcing measures become prevalent
    - This may have boosted the competitive effect of segmentation
  - **Impeded selection**
    - Part of the secondary segment might serve monitoring purposes
    - Selection into the primary segment may have been impeded and, hence, have boosted the number of secondary employees
- Dualities will be proxied by the **incidence of temporary employment**
- The effects of the crisis are captured by dummy variables

Relevant variables before and after the crisis

Key macroeconomic and labour market variables, averages		
	EU	
	Before the crisis (2004Q1-2010Q2)	After the crisis (2010Q3 - 2016Q4)
Inflation rate	2.75%	1.34%
Nominal wage growth	5.21%	1.96%
Real wage growth	2.46%	0.61%
Unemployment rate	9.36%	12.03%
Temporary contract rate	10.79%	11.01%
Segmentation rate	20.15%	23.04%

Source: Eurostat LFS and ESA

Development of relevant labour market variables

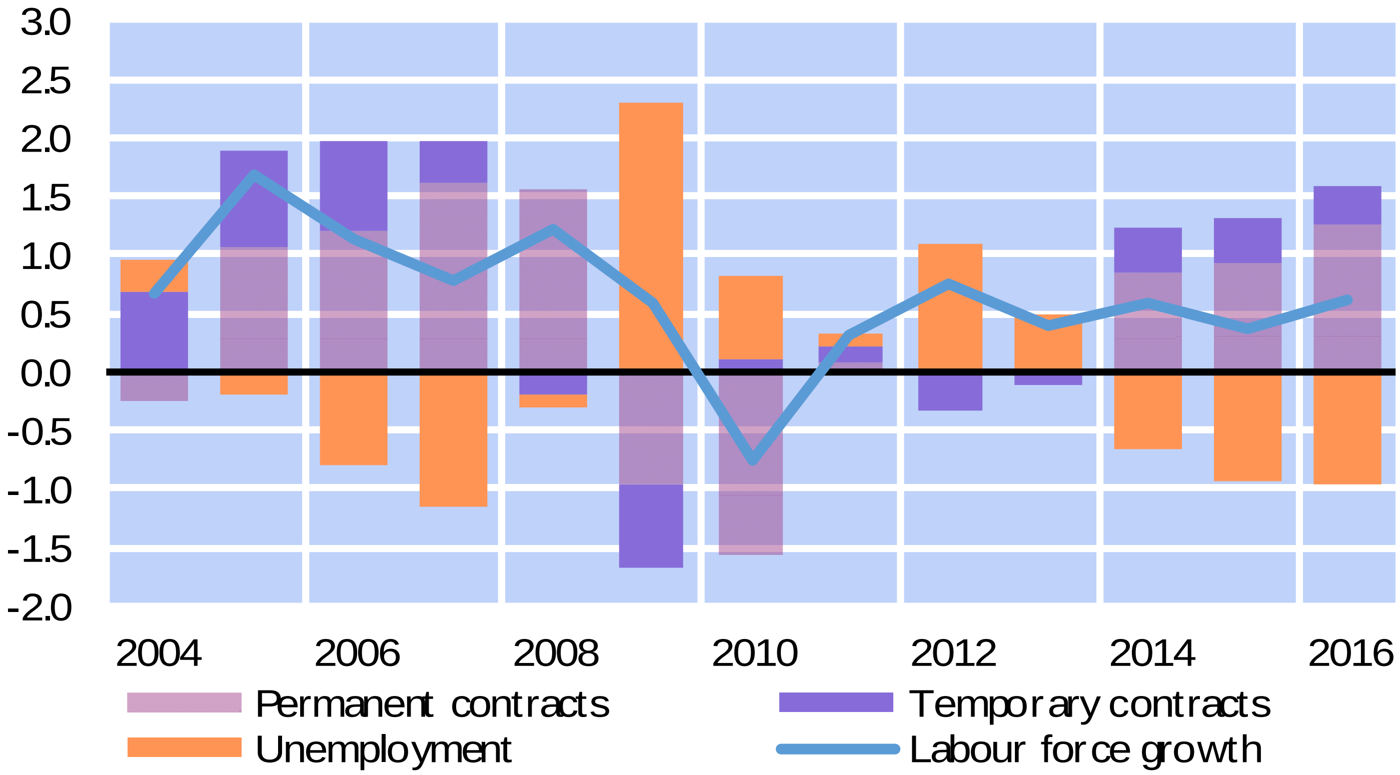


Source: Eurostat LFS.

Drivers of labour force participation: employment, unemployment and temporary employment

EU: Contribution to labour force growth

in % and pp.



Source: Eurostat.

The role of the secondary sector – estimation results

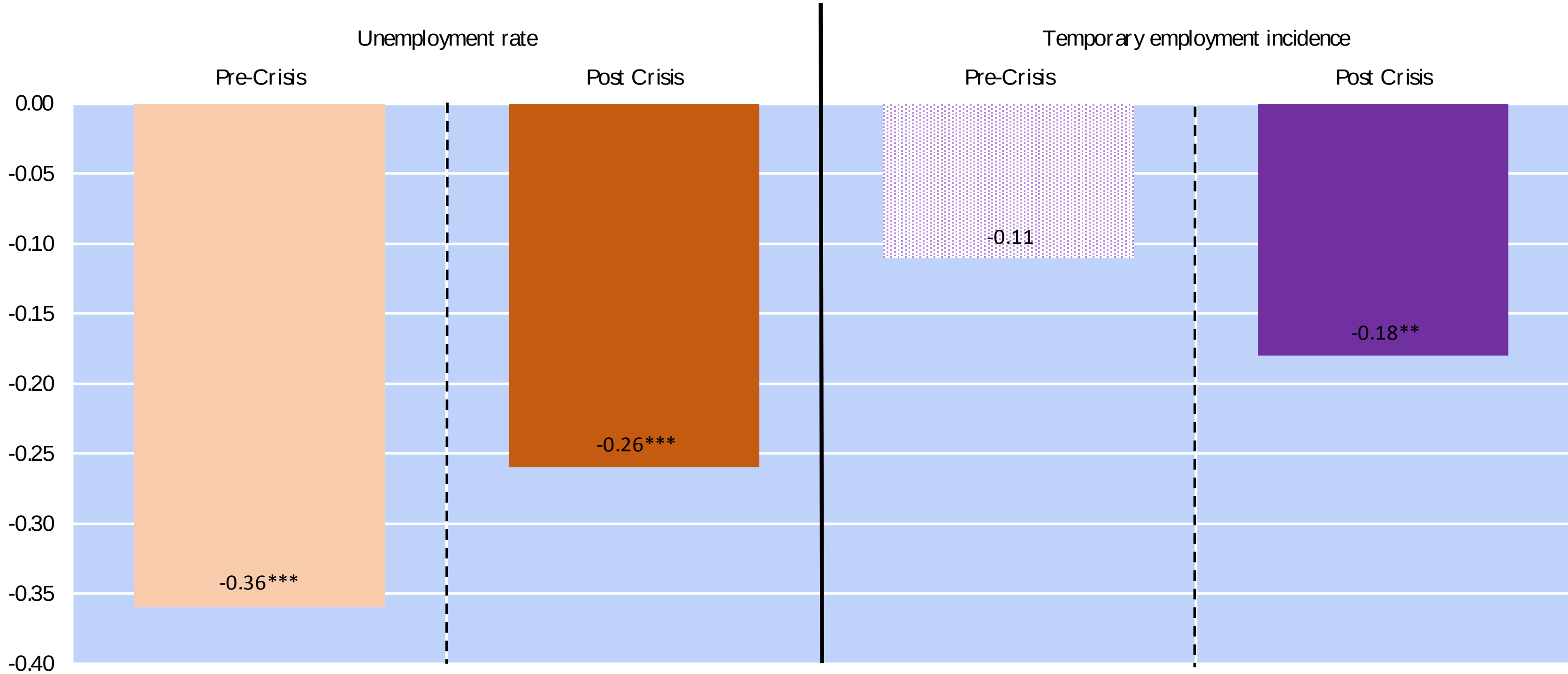
The determinants of wage growth in Europe

	EU Full Model
Wage growth per hour, (t-1)	0.55***
	(15.44)
Inflation (t-1)	0.20***
	(2.70)
Wage share (t-1)	-0.04**
	(-2.00)
Hourly productivity (t-1)	0.19***
	(5.12)
Relative income (t-1)	-0.08***
	(-5.91)
Unemployment, before the crisis (t-1)	**-0.36*** **
	(-5.93)
Unemployment, after the crisis (t-1)	**-0.26*** **
	(-5.36)
Temporary employment, before the crisis (t-1)	**-0.11**
	(-1.56)
Temporary employment, after the crisis (t-1)	**-0.18** **
	(-2.25)
Constant	-0.01
	(-1.25)
Observations	1277

Fixed effects panel estimations including time dummies for 25 members of the EU. RO, BU and HR are excluded due to data problems. The dependent variable is wage growth per hour. Effects of unemployment and temporary employment before and after the crisis are isolated by interaction with dummy variables. The cut-off date for the crisis is Q3 2010. All independent variables are in lags. The crisis breakpoint is Q3 2010.

Wage growth increasingly dampened by the incidence of temporary contracts

Effect of a 1pp. increase in the unemployment rate and the rate of temporary employment



*Source: Eurostat. The underlying estimation is based on a regression of wage growth on its own lag, inflation, the wage share, productivity per hour, relative income, the unemployment rate and the rate of temporary employment for quarterly data for a panel of up to 25 EU countries (excluding HR, BG and RO). Numbers in bars are the estimated coefficients of the respective variables. Effects before and after the crisis are isolated by interacting the respective variables with dummies. Stars show the significance level for * p < 0.1, ** p < 0.05 and *** p < 0.01.*

Conclusions

- **Labour market dualities have important macroeconomic effects**
- **A higher incidence of temporary contracts lowers wage growth in Europe**
- **The impact of labour market dualities on wage growth in Europe has increased since the crisis**
- **This helps to explain the flattening of the Phillips curve**